Name: _____

at1110paper__practice__test (v31)

1. Solve the equation.

$$7x^2 - 15x - 50 \;=\; 4x^2 - 5x - 2$$

$$3x^2 - 10x - 48 = 0$$
$$(3x + 8)(x - 6) = 0$$
$$x = \frac{-8}{3} \qquad x = 6$$

2. Expand the following expression into standard form.

$$(8x + 9)(7x - 3)$$

$$56x^2 - 24x + 63x - 27$$
$$56x^2 + 39x - 27$$

3. Solve the equation.

$$(3x + 2)(7x - 6) \;=\; 0$$

$$x = \frac{-2}{3} \qquad x = \frac{6}{7}$$

4. Expand the following expression into standard form.

$$(5x + 6)(5x - 6)$$

$$25x^2 - 30x + 30x - 36$$
$$25x^2 - 36$$

5. Factor the expression.
$$16x^2 - 9$$

$$(4x + 3)(4x - 3)$$

6. Expand the following expression into standard form.
$$(5x + 6)^2$$

$$25x^2 + 30x + 30x + 36$$
$$25x^2 + 60x + 36$$

7. Solve the equation with factoring by grouping.
$$10x^2 + 12x - 15x - 18 \;=\; 0$$

$$(2x - 3)(5x + 6) = 0$$
$$x = \frac{3}{2} \qquad x = \frac{-6}{5}$$

8. Factor the expression.
$$x^2 - 7x + 12$$

$$(x - 4)(x - 3)$$